

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (withdrawn) A purified nucleic acid molecule encoding a human KDR protein which consists essentially of the nucleotide sequence

ATGGAGAGCAAGGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCCGGGCGCCTCTGTGGG
TTGCCTAGTGTCTCTTGATCTGCCCAGGCTCAGCATACAAAAAGACATACTTACAATTAAGGCTAA
TACAACCTCTTCAAATTACTTGCAGGGGACAGAGGGACTTGGACTGGCTTTGGCCCAATAATCAGAGTG
GCAGTGAGCAAAGGGTGGAGGTGACTGAGTGCAGCGATGGCCTCTTCTGTAAGACACTCACAATTCCA
AAAGTGATCGGAAATGACACTGGAGCCTACAAGTGCTTCTACCGGGAAACTGACTTGGCCTCGGTCAT
TTATGTCTATGTTCAAGATTACAGATCTCCATTTATTGCTTCTGTTAGTGACCAACATGGAGTCGTGTA
CATTACTGAGAACAAAAACAAAACCTGTGGTGATTCCATGTCTCGGGTCCATTTCAAATCTCAACGTGT
CACTTTGTGCAAGATACCCAGAAAAGAGATTTGTTCCCTGATGGTAACAGAATTTCCCTGGGACAGCAAG
AAGGGCTTTACTATTCCAGCTACATGATCAGCTATGCTGGCATGGTCTTCTGTGAAGCAAAAATTAAT
GATGAAAGTTACCAGTCTATTATGTACATAGTTGTCGTTGTAGGGTATAGGATTTATGATGTGGTTCTG
AGTCCGTCTCATGGAATTGAACTATCTGTTGGAGAAAAGCTTGTCTTAAATTGTACAGCAAGAACTGA
ACTAAATGTGGGGATTGACTTCAACTGGGAATACCCTTCTTCGAAGCATCAGCATAAGAACTTGTA
ACCGAGACCTAAAAACCCAGTCTGGGAGTGAGATGAAGAAATTTTGGAGCACCTTAACTATAGATGGT
GTAACCCGGAGTGACCAAGGATTGTACACCTGTGCAGCATCCAGTGGGCTGATGACCAAGAAGAACA
GCACATTTGTCAGGGTCCATGAAAAACCTTTTGTGCTTTTGGAAAGTGGCATGGAATCTCTGGTGGAAG
CCACGGTGGGGGAGCGTGTCAGAATCCCTGCGAAGTACCTTGGTTACCCACCCCAGAAATAAAATGG
TATAAAATGGAATACCCCTTGAGTCCAATCACACAATTAAAGCGGGGCATGTACTGACGATTATGGA
AGTGAGTGAAAGAGACACAGGAAATTACACTGTCATCCTTACCAATCCCATTTCAAAGGAGAAGCAG
AGCCATGTGGTCTCTCTGGTTGTGTATGTCCACCCCAGATTGGTGAGAAATCTCTAATCTCTCCTGTG
GATTCCTACCAGTACGGCACCACTCAAACGCTGACATGTACGGTCTATGCCATTCCTCCCCGCATCAC
ATCCACTGGTATTGGCAGTTGGAGGAAGAGTGCGCCAACGAGCCAGCCAAGCTGTCTCAGTGACAA
ACCCATACCCCTTGTGAAGAATGGAGAAGTGTGGAGGACTTCCAGGGAGGAAATAAAATTGAAGTTAA
TAAAAATCAATTTGCTCTAATTGAAGGAAAAACAAAACCTGTAAGTACCCTTGTATCCAAGCGGCAA

ATGTGTCAGCTTTGTACAAATGTGAAGCGGTCAACAAAGTCGGGAGAGGAGAGAGGGTGATCTCCTTC
CACGTGACCAGGGGTCCTGAAATTACTTTGCAACCTGACATGCAGCCCACTGAGCAGGAGAGCGTGTC
TTTGTGGTGCAGTGCAGACAGATCTACGTTTGAGAACCTCACATGGTACAAGCTTGGCCACAGCCTCT
GCCAATCCATGTGGGAGAGTTGCCACACCTGTTTGCAAGAACTTGGATACTCTTTGGAAATTGAATG
CCACCATGTTCTCTAATAGCACAAATGACATTTTGATCATGGAGCTTAAGAATGCATCCTTGCAGGACC
AAGGAGACTATGTCTGCCTTGCTCAAGACAGGAAGACCAAGAAAAGACATTGCGTGGTCAGGCAGCT
CACAGTCCTAGAGCGTGTGGCACCCACGATCACAGGAAACCTGGAGAATCAGACGACAAGTATTGGG
GAAAGCATCGAAGTCTCATGCACGGCATCTGGGAATCCCCCTCCACAGATCATGTGGTTTAAAGATAA
TGAGACCTTGTAGAAGACTCAGGCATTGTATTGAAGGATGGGAACCGGAACCTCACTATCCGCAGAG
TGAGGAAGGAGGACGAAGGCCTCTACACCTGCCAGGCATGCAGTGTCTTGGCTGTGCAAAAGTGGA
GGCATTTTTTCATAATAGAAGGTGCCCAGGAAAAGACGAACTTGGAAATCATTATTCTAGTAGGCACGG
CGGTGATTGCCATGTTCTTCTGGCTACTTCTTGTTCATCATCCTACGGACCGTTAAGCGGGCCAATGGAG
GGGAACTGAAGACAGGCTACTTGTCCATCGTCATGGATCCAGATGAACTCCCATTGGATGAACATTGT
GAACGACTGCCTTATGATGCCAGCAAATGGGAATTCCCCAGAGACCGGCTGAAGCTAGGTAAGCCTCT
TGGCCGTGGTGCCTTTGGCCAAGTGATTGAAGCAGATGCCTTTGGAATTGACAAGACAGCAACTTGCA
GGACAGTAGCAGTCAAAATGTTGAAAGAAGGAGCAACACACAGTGAGCATCGAGCTCTCATGTCTGA
ACTCAAGATCCTCATTCATATTGGTCACCATCTCAATGTGGTCAACCTTCTAGGTGCCTGTACCAAGCC
AGGAGGGGCACTCATGGTGATTGTGGAATTCTGCAAATTTGGAAACCTGTCCACTTACCTGAGGAGCA
AGAGAAATGAATTTGTCCCCTACAAGACCAAAGGGGCACGATTCCGTCAAGGGAAAGACTACGTTGG
AGCAATCCCTGTGGATCTGAAACGGCGCTTGGACAGCATCACCAGTAGCCAGAGCTCAGCCAGCTCTG
GATTTGTGGAGGAGAAGTCCCTCAGTGATGTAGAAGAAGAGGAAGCTCCTGAAGATCTGTATAAGGA
CTTCCTGACCTTGGAGCATCTCATCTGTTACAGCTTCCAAGTGGCTAAGGGCATGGAGTTCTTGGCATC
GCGAAAGTGTATCCACAGGGACCTGGCGGCACGAAATATCCTCTTATCGGAGAAGAACGTGGTTAAA
ATCTGTGACTTTGGCTTGGCCCGGGATATTTATAAAGATCCAGATTATGTCAGAAAAGGAGATGCTCG
CCTCCCTTTGAAATGGATGGCCCCAGAAACAATTTTTGACAGAGTGTACACAATCCAGAGTGACGTCT
GGTCTTTTGGTGTTTTGCTGTGGGAAATATTTTCCTTAGGTGCTTCTCCATATCCTGGGGTAAAGATTGA
TGAAGAATTTTGTAGGCGATTGAAAGAAGGAACTAGAATGAGGGCCCCTGATTATACTACACCAGAA
ATGTACCAGACCATGCTGGACTGCTGGCACGGGGAGCCCAGTCAGAGACCCACGTTTTTCAGAGTTGGT
GGAACATTTGGGAAATCTCTTGCAAGCTAATGCTCAGCAGGATGGCAAAGACTACATTGTTCTTCCGA
TATCAGAGACTTTGAGCATGGAAGAGGATTCTGGACTCTCTCTGCCTACCTCACCTGTTTCCTGTATGG
AGGAGGAGGAAGTATGTGACCCCAAATTCATTATGACAACACAGCAGGAATCAGTCAGTATCTGCA
GAACAGTAAGCGAAAGAGCCGGCCTGTGAGTGTA AAAACATTTGAAGATATCCCGTTAGAAGAACCA

GAAGTAAAAGTAATCCCAGATGACAACCAGACGGACAGTGGTATGGTTCTTGCCTCAGAAGAGCTGA
AAACTTTTGAAGACAGAACCAAAATTATCTCCATCTTTTGGTGGAAATGGTGCCAGCAAAAGCAGGGAG
TCTGTGGCATCTGAAGGCTCAAACCAGACAAGCGGCTACCAGTCCGGATATCACTCCGATGACACAGA
CACCACCGTGTACTCCAGTGAGGAAGCAGAACTTTTAAAGCTGATAGAGATTGGAGTGCAAACCGGTA
GCACAGCCCAGATTCTCCAGCCTGACTCGGGGACCACACTGAGCTCTCCTCCTGTTTAA (SEQ ID NO:1),
wherein said nucleic acid molecule encodes a human KDR protein or biologically active form
thereof where at least amino acid residues selected from the group consisting of Val at position
848, Glu at position 498, Ala at position 772, Arg at position 787, Lys at position 835 and Ser at
position 1347 are present in said protein.

Claim 2 (withdrawn) A purified DNA molecule encoding human KDR wherein said DNA
molecule encodes a protein consisting essentially of the amino acid sequence:
MESKVLLAVALWLCVETRAASVGLPSVSLDLPRLSIQKDILT IKANTTLQITCRGQRDLDWLWPNNQSGSE
QRVEVTECSDGLFCKTLTIPKVIGNDTGAYKCFYRETDLASVIYVYVQDYRSPFIASVSDQHGVVYITENKN
KTVVIPCLGSISNLNVSLCARYPEKRFVPDGNRISWDSKKGFTIPSYMISYAGMVFCEAKINDESYQSIMYIV
VVVGYRIYDVVLSPSHGIELSVGEKLVNCTARTELNVGIDFNWEYPSSKHQHKKL VNRDLKTQSGSEM K
KFLSTLTIDGVTRSDQGLYTCAASSGLMTKKNSTFVRVHEKPFVAFGSGMESLVEATVGERVRIPAKYLG Y
PPPEIKWYKNGIPLESNHTIKAGHVLTIMEVSE RDTGNYTVILTNPISKEKQSHVVSLVVYVPPQIGESLISP
VDSYQYGTQTTLTCTVYAIPPPHHIHWYWQLEEECANEPSQAVSVTNPYPCEEWRSVEDFQGGNKIEV NK
NQFALIEGKNKTVSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPD MQPTEQESVSLWCT
ADRSTFENLTWYKLG PQPLPIHV GELPTPVCKNLDTLWKL NATMFSNSTNDILIMELKNASLQDQGDYVCL
AQDRKTKKRHC VVRQLTVLERVAPTITGNLENQTTSIGESIEVSCTASGNPPPQIMWFKDNETLVEDSGIVL
KDGNRNLTIRRV RKEDEGLYTCQACSVLGCAKVEAFFIIEGAQEKTNLEIILVGTA VIAMFFWLLLVIILRT
VKRANGGELKTGYLSIVMDPDELPLDEHCERLPYDASKWEFPRDRLKLGKPLGRGA FGQVIEADAFGIDKT
ATCRTVAVKMLKEGATHSEHRALMSELKILIHIGHHLNVVNLLGACTKPGGPLMVIVEFCKFGNLSTYLRS
KRNEFVPYKTKGARFRQGKD YVGAIPVDLKRRLDSITSSQSSASSGFVEEKSLS DVEEEEAPEDLYKDFTL
EHLICYSFQVAKGMEFLASRKCIHRDLAARNILLSEKNVVKICDFGLARDIYKDPDYVRKG DARLPLKWM
APETIFDRVYTIQSDVWSFGVLLWEIFSLGASPYPGVKIDEEFCRRLKEGTRMRAPDYTTPEMYQTMLDCW
HGEPSQRPTFSELVEHLGNLLQANAQQDGKD YIVLPISETLSMEEDSGLSLPTSPVSCMEEEEVCDPKFHYD
NTAGISQYLQNSKRKSRPVSVKTFEDIPLEEPEVKVIPDDNQTD SGMLVASEELKTLEDRTKLSPSFGGMVP
SKSRESVASEGSNQTS GYQSGYHSDDTDTTVYSSEEAELLK LIEIGVQTGSTAQILQPDSGTTLSSPPV, as
set forth in a three-letter abbreviation in SEQ ID NO:2 and containing amino acid residues

selected from the group consisting of Val at position 848, Glu at position 498, Ala at position 772, Arg at position 787, Lys at position 835 and Ser at position 1347.

Claim 3 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 1.

Claim 4 (withdrawn) An expression vector of claim 3 which is a eukaryotic expression vector.

Claim 5 (withdrawn) An expression vector of claim 3 which is a prokaryotic expression vector.

Claim 6 (withdrawn) A host cell which expresses a recombinant human KDR protein wherein said host cell contains the expression vector of claim 3.

Claim 7 (withdrawn) A host cell which expresses a recombinant human KDR protein wherein said host cell contains the expression vector of claim 4.

Claim 8 (withdrawn) A host cell which expresses a recombinant human KDR protein wherein said host cell contains the expression vector of claim 5.

Claim 9 (withdrawn) A host cell of claim 6 wherein said human KDR protein is overexpressed from said expression vector.

Claim 10 (withdrawn) A host cell of claim 7 wherein said human KDR protein is overexpressed from said expression vector.

Claim 11 (withdrawn) A host cell of claim 8 wherein said human KDR protein is overexpressed from said expression vector.

Claim 12 (canceled) A subcellular membrane fraction obtained from the host cell of claim 9 which contains recombinant human KDR protein.

Claim 13 (canceled) A subcellular membrane fraction obtained from the host cell of claim 10 which contains recombinant human KDR protein.

Claim 14 (canceled) A subcellular membrane fraction obtained from the host cell of claim 11 which contains recombinant human KDR protein.

Claim 15 (withdrawn) A purified DNA molecule which consists of the nucleotide sequence:
ATGGAGAGCAAGGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCCGGGCCGCTCTGTGGG
TTTGCTAGTGTCTTCTGATCTGCCCAGGCTCAGCATACAAAAAGACATACTTACAATTAAGGCTAA
TACAACTCTTCAAATTACTTGCAGGGGACAGAGGGACTTGGACTGGCTTTGGCCCAATAATCAGAGTG
GCAGTGAGCAAAGGGTGGAGGTGACTGAGTGCAGCGATGGCCTCTTCTGTAAGACACTCACAAATCCA
AAAGTGATCGGAAATGACACTGGAGCCTACAAGTGCTTCTACCGGGAACTGACTTGGCCTCGGTCAT
TTATGTCTATGTTCAAGATTACAGATCTCCATTTATTGCTTCTGTAGTGACCAACATGGAGTCGTGTA
CATTACTGAGAACAAAAACAAACTGTGGTGATTCCATGTCTCGGGTCCATTTCAAATCTCAACGTGT
CACTTTGTGCAAGATACCCAGAAAAGAGATTTGTTCTGATGGTAACAGAAATTTCTGGGACAGCAAG
AAGGGCTTTACTATTCCCAGCTACATGATCAGCTATGCTGGCATGGTCTTCTGTGAAGCAAAAATTAAT
GATGAAAGTTACCAGTCTATTATGTACATAGTTGTCGTTGTAGGGTATAGGATTTATGATGTGGTTCTG
AGTCCGTCTCATGGAATTGAACCTATCTGTTGGAGAAAAGCTTGTCTTAAATTGTACAGCAAGAACTGA
ACTAAATGTGGGGATTGACTTCAACTGGGAATACCCCTTCTCGAAGCATCAGCATAAGAACTTGTA
ACCGAGACCTAAAAACCCAGTCTGGGAGTGAGATGAAGAAATTTTGGAGCACCTTAACTATAGATGGT
GTAACCCGGAGTGACCAAGGATTGTACACCTGTGCAGCATCCAGTGGGCTGATGACCAAGAAGAACA
GCACATTTGTCAGGGTCCATGAAAAACCTTTTGTGCTTTTGGAAAGTGGCATGGAATCTCTGGTGGAAG
CCACGGTGGGGGAGCGTGTGAGAAATCCCTGCGAAGTACCTTGGTTACCCACCCCAAGAAATAAATGG
TATAAAATGGAATACCCCTTGAGTCCAATCACACAATTAAAGCGGGGCATGTACTGACGATTATGGA
AGTGAGTGAAAGAGACACAGGAAATTACACTGTCATCCTTACCAATCCCATTTCAAAGGAGAAGCAG

AGCCATGTGGTCTCTCTGGTTGTGTATGTCCACCCCAGATTGGTGAGAAATCTCTAATCTCTCCTGTG
GATTCTACCAGTACGGCACCCTCAAACGCTGACATGTACGGTCTATGCCATTCCTCCCCCGCATCAC
ATCCACTGGTATTGGCAGTTGGAGGAAGAGTGCGCCAACGAGCCCAGCCAAGCTGTCTCAGTGACAA
ACCCATACCCTTGTGAAGAATGGAGAAGTGTGGAGGACTTCCAGGGAGGAAATAAAATTGAAGTTAA
TAAAAATCAATTTGCTCTAATTGAAGGAAAAACAAAACCTGTAAGTACCCTTGTTATCCAAGCGGCAA
ATGTGTCAGCTTTGTACAAATGTGAAGCGGTCAACAAAGTCGGGAGAGGAGAGAGGGTGATCTCCTTC
CACGTGACCAGGGGTCCTGAAATTACTTTGCAACCTGACATGCAGCCCACTGAGCAGGAGAGCGTGTC
TTTGTGGTGCCTGACAGACAGATCTACGTTTGAGAACCTCACATGGTACAAGCTTGGCCACAGCCTCT
GCCAATCCATGTGGGAGAGTTGCCACACCTGTTTGCAAGAACTTGGATACTCTTTGGAAATTGAATG
CCACCATGTTCTCTAATAGCACAAATGACATTTTGATCATGGAGCTTAAGAATGCATCCTTGCAGGACC
AAGGAGACTATGTCTGCCTTGCTCAAGACAGGAAGACCAAGAAAAGACATTGCGTGGTCAGGCAGCT
CACAGTCTAGAGCGTGTGGCACCCACGATCACAGGAAACCTGGAGAATCAGACGACAAGTATTGGG
GAAAGCATCGAAGTCTCATGCACGGCATCTGGGAATCCCCCTCCACAGATCATGTGGTTTAAAGATAA
TGAGACCTTGTAGAAGACTCAGGCATTGTATTGAAGGATGGGAACCGGAACCTCACTATCCGCAGAG
TGAGGAAGGAGGACGAAGGCCTCTACACCTGCCAGGCATGCAGTGTCTTGGCTGTGCAAAAGTGGA
GGCATTTTTTCATAATAGAAGGTGCCCAGGAAAAGACGAACTTGGAAATCATTATTCTAGTAGGCACGG
CGGTGATTGCCATGTTCTTCTGGCTACTTCTTGTTCATCATCCTACGGACCGTTAAGCGGGCCAATGGAG
GGGAACTGAAGACAGGCTACTTGTCCATCGTCATGGATCCAGATGAACTCCCATTGGATGAACATTGT
GAACGACTGCCTTATGATGCCAGCAAATGGGAATTCCCCAGAGACCGGCTGAAGCTAGGTAAGCCTCT
TGGCCGTGGTGCCTTTGGCCAAGTGATTGAAGCAGATGCCTTTGGAATTGACAAGACAGCAACTTGCA
GGACAGTAGCAGTCAAAATGTTGAAAGAAGGAGCAACACACAGTGAGCATCGAGCTCTCATGTCTGA
ACTCAAGATCCTCATTTCATATTGGTCACCATCTCAATGTGGTCAACCTTCTAGGTGCCTGTACCAAGCC
AGGAGGGGCACTCATGGTGATTGTGGAATTCTGCAAAATTTGGAAACCTGTCCACTTACCTGAGGAGCA
AGAGAAATGAATTTGTCCCTACAAGACCAAAGGGGCACGATTCCGTCAAGGGAAAGACTACGTTGG
AGCAATCCCTGTGGATCTGAAACGGCGCTTGGACAGCATCACCAGTAGCCAGAGCTCAGCCAGCTCTG
GATTTGTGGAGGAGAAGTCCCTCAGTGATGTAGAAGAAGAGGAAGCTCCTGAAGATCTGTATAAGGA
CTTCCTGACCTTGGAGCATCTCATCTGTTACAGCTTCCAAGTGGCTAAGGGCATGGAGTTCTTGGCATC
GCGAAAGTGTATCCACAGGGACCTGGCGGCACGAAATATCCTCTTATCGGAGAAGAACGTGGTTAAA
ATCTGTGACTTTGGCTTGGCCCGGGATATTTATAAAGATCCAGATTATGTCAGAAAAGGAGATGCTCG
CCTCCCTTTGAAATGGATGGCCCCAGAAACAATTTTGTACAGAGTGTACACAATCCAGAGTGACGTCT
GGTCTTTTGGTGTTTTGCTGTGGGAAATATTTTCCTTAGGTGCTTCTCCATATCCTGGGGTAAAGATTGA
TGAAGAATTTTGTAGGCGATTGAAAGAAGGAACTAGAATGAGGGCCCCTGATTATACTACACCAGAA
ATGTACCAGACCATGCTGGACTGCTGGCACGGGGAGCCCAGTCAGAGACCCACGTTTTTCAGAGTTGGT

GGAACATTTGGGAAATCTCTTGCAAGCTAATGCTCAGCAGGATGGCAAAGACTACATTGTTCTTCCGA
TATCAGAGACTTTGAGCATGGAAGAGGATTCTGGACTCTCTCTGCCTACCTCACCTGTTTCCTGTATGG
AGGAGGAGGAAGTATGTGACCCCAAATTCCATTATGACAACACAGCAGGAATCAGTCAGTATCTGCA
GAACAGTAAGCGAAAGAGCCGGCCTGTGAGTGTA AAAACATTTGAAGATATCCCGTTAGAAGAACCA
GAAGTAAAAGTAATCCCAGATGACAACCAGACGGACAGTGGTATGGTTCTTGCCTCAGAAGAGCTGA
AACTTTTGAAGACAGAACCAAATTATCTCCATCTTTTGGTGGAATGGTGCCAGCAAAAGCAGGGAG
TCTGTGGCATCTGAAGGCTCAAACCAGACAAGCGGCTACCAGTCCGGATATCACTCCGATGACACAGA
CACCACCGTGTACTCCAGTGAGGAAGCAGAACTTTTAAAGCTGATAGAGATTGGAGTGCAAACCGGTA
GCACAGCCCAGATTCTCCAGCCTGACTCGGGGACCACACTGAGCTCTCCTCCTGTTTAA, disclosed as
SEQ ID NO:1.

Claim 16 (canceled) A purified human KDR protein which consists of the amino acid sequence

MESKVLLAVALWLCVETRAASVGLPSVSLDLPRLSIQKDILTIKANTTLQITCRGQRDLWLWPNNQS
GSEQRVEVTECS DGLFCKLTIPKVIGNDTGAYKCFYRETDLASVIYVYVQDYRSPFIASVSDQHGVVYITE
NKNKTVVIPCLGSISNLNVSLCARYPEKRFVPDGNRISWDSKKGFTIPSYMISYAGMVFCEAKINDESYQSI
MYIVVVVGYRIYDVVLSPSHGIELSVGEKLVLNCTARTELVNVDGDFNWEYPSSKHQHKKLVNRDLKTQSGS
EMKKFLSTLTIDGVTRSDQGLYTCAASSGLMTKKNSTFVRVHEKPFVAFGSGMESLVEATVGERVRIPAKY
LGYPPEIKWYKNGIPLESNHTIKAGHVLTIMEVSRDGTGNYTVILTNPISKEKQSHVVS LVVYVPPQIGES
LISPVDSYQYGTQTTLCTVYAIPPPHHIHWYQLEEECANEPSQAVSVTNPYPCEEWRSVEDFQGGNKIE
VNKNQFALIEGKNKTVSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPDMPTEQESVSL
WCTADRSTFENLTWYKLGPPQLPIHV GELPTPVCKNLDTLWKL NATMFSNSTNDILIMELKNASLQDQGD
YVCLAQDRKTKKRHC VVRQLTVLERVAPTITGNLENQTTSIGESIEVSCTASGNPPPQIMWFKDNETLVEDS
GIVLKDGNRNL TIRRV RKEDEGLYTCQACSVLGCAKVEAFFIIEGAQEKTNLEIILVGTAVIAMFFWLLL VII
LRTVKRANGGELKTGYLSIVMDPDELPLDEHCERLPYDASKWEFPRDRLKLGKPLGRGAFGQVIEADAFGI
DKTATCRTVA VKMLKEGATHSEHRALMSELKILIHIGHHLNVVNLLGACTKPGGPLMVIVEFCKFGNLSTY
LRSKRNEFVPYKTKGARFRQGKD YVGAIPVDLKRRLDSITSSQSSASSGFVEEKSLS DVEEEEAPEDLYKDF
LTLEHLICYSFQVAKGMEFLASRKCIHRDLAARNILLSEKNVVKICDFGLARDIYKDPDYVRKGDARLPLK
WMA PETIFDRVYTIQSDVWSFGVLLWEIFSLGASPYPGVKIDEEFCRRLKEGTRMRAPDYTTPEMYQTMLD
CWHGEPSQRPTFSELVEHLGNLLQANAQQDGKDYIVLP ISETLSMEEDSGLSLPTSPVSCMEEEEVCDPKFH
YDNTAGISQYLQNSKRKSRPVSVKTFEDIPLEEPEVKVIPDDNQTD SGMLVASEELKTLEDRTKLSPSFGGM
VPSKSRESVASEGSNQTS GYQSGYHSDDTDTTVYSSEEAE LLK LIEIGVQTGSTAQILQPDSGTTLSSPPV, as
set forth in three letter abbreviation in SEQ ID NO:2 and containing amino acid residues selected

from the group consisting of Val at position 848, Glu at position 498, Ala at position 772, Arg at position 787, Lys at position 835 and Ser at position 1347.

Claim 17 (canceled) The purified human KDR protein of claim 16 as set forth in SEQ ID NO:2.

Claim 18 (withdrawn) A process for the expression of a human KDR protein in a recombinant host cell, comprising:

- (a) transfecting the expression vector of claim 3 into a suitable host cell; and,
- (b) culturing the host cells of step (a) under conditions which allow expression of the human KDR protein from the expression vector.

Claim 19 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 15.

Claim 20 (withdrawn) A purified nucleic acid molecule encoding an intracellular portion of a human KDR protein which comprises from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue.

Claim 21 (withdrawn) A purified nucleic acid molecule of claim 20 encoding an intracellular portion of a human KDR protein which comprises from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 772 is an alanine residue, position 787 is an arginine residue, position 835 is a lysine residue, position 848 is a valine residue and position 1347 is a serine residue.

Claim 22 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 20.

Claim 23 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 21.

Claim 24 (canceled) A purified protein fragment which is an intracellular portion of a human KDR protein, comprising from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue.

Claim 25 (canceled) A purified protein fragment of claim 24 which comprises from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 772 is an alanine residue, position 787 is an arginine residue, position 835 is a lysine residue, position 848 is a valine residue and position 1347 is a serine residue.

Claim 26 (withdrawn) A purified nucleic acid molecule encoding an soluble KDR fusion protein which comprises from about amino acid 790 to about amino acid 1356 of human KDR as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue.

Claim 27 (withdrawn) A purified nucleic acid molecule of claim 26 wherein said KDR fusion protein comprises from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, position 772 being an alanine residue, position 787 being an arginine residue, position 835 being a lysine residue, position 848 being a valine residue and position 1347 being a serine residue.

Claim 28 (withdrawn) A purified nucleic acid molecule of claim 27 which encodes GST-KDR.

Claim 29 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 26.

Claim 30 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 27.

Claim 31 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 28.

Claim 32 (canceled) A purified KDR fusion protein which is characterized by an intracellular portion of a human KDR protein, comprising from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue.

Claim 33 (canceled) A purified KDR fusion protein of claim 32 which comprises from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 772 is an alanine residue, position 787 is an arginine residue, position 835 is a lysine residue, position 848 is a valine residue and position 1347 is a serine residue.

Claim 34 (canceled) The purified KDR fusion protein of claim 33 which is GST-KDR.

Claim 35 (withdrawn) A purified nucleic acid molecule encoding an extracellular portion of a human KDR protein which comprises from about amino acid 1 to about amino acid 644 as set forth in SEQ ID NO:2, wherein position 498 is a glutamic acid residue.

Claim 36 (withdrawn) An expression vector for the expression of a human KDR protein in a recombinant host cell wherein said expression vector comprises the DNA molecule of claim 36.

Claim 37 (canceled) A purified protein fragment which is an extracellular portion of a human KDR protein, comprising from about amino acid 1 to about amino acid 790 as set forth in SEQ ID NO: 2, wherein position 498 is a glutamic acid residue, position 772 is an alanine residue and position 787 is an arginine residue.

Claim 38 (withdrawn) An isolated nucleic acid molecule of claim 20 wherein a termination codon is inserted such that the KDR open reading frame terminates at about Tyr 1175.

Claim 39 (withdrawn) An isolated nucleic acid of claim 38 which is contained within a DNA vector, pBlueBacHis2B.

Claim 40 (withdrawn) The DNA vector of claim 39 which is pBBH-KDR-1.

Claim 41 (withdrawn) A method of selecting a compound which antagonizes human KDR which comprises a biological assay wherein a test compound is added in combination with a KDR protein or protein fragment and a substrate, said substrate being involved in a measurable interaction at a domain of interest within wild-type KDR such that a compound antagonist interacts with said KDR protein, resulting in a measurable decrease in KDR:substrate activity.

Claim 42 (withdrawn) A method of claim 41 wherein said KDR protein is GST/KDR-1.

Claim 43 (withdrawn) A method of claim 42 wherein said substrate is pEY.

Claim 44 (withdrawn) A method of selecting a compound which is an agonist of human KDR which comprises a biological assay wherein a test compound is added in combination with a KDR protein or protein fragment and a substrate, said substrate being involved in a measurable interaction at a domain of interest within wild-type KDR such that a compound antagonist interacts with said KDR protein, resulting in a measurable increase in KDR:substrate activity.

Claim 45 (withdrawn) A method of claim 44 wherein said KDR protein is GST/KDR-1.

Claim 46 (withdrawn) A method of claim 45 wherein said substrate is pEY.

Claim 47 (previously presented): A membrane preparation comprising the human KDR protein which consists of the amino acid sequence as set forth in SEQ ID NO: 2, wherein said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the human KDR protein.

Claim 48 (currently amended): A membrane preparation comprising a protein fragment which is an intracellular portion of a human KDR protein, comprising from about amino acid ~~772~~ 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue, wherein said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the human KDR protein fragment.

Claim 49 (currently amended): ~~A The membrane preparation comprising a protein fragment which is an intracellular portion of a human KDR protein of claim 48, comprising from about amino acid 772 to about amino acid 1356 as set forth in SEQ ID NO: 2,~~ wherein position 772 is an alanine residue, position 787 is an arginine residue, position 835 is a lysine residue, position 848 is a valine residue and position 1347 is a serine residue, wherein said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the human KDR protein fragment.

Claim 50 (currently amended): A membrane preparation comprising a KDR fusion protein comprising a KDR protein and a heterologous protein, wherein the KDR protein is characterized by an intracellular portion of a human KDR protein, comprising from about amino acid ~~772~~ 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine, wherein

said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the human KDR fusion protein.

Claim 51 (currently amended): A ~~The~~ membrane preparation ~~comprising a KDR fusion protein comprising a KDR protein and a heterologous protein, wherein the KDR protein is characterized by an intracellular portion of a human KDR protein of claim 50, comprising from about amino acid 772 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 772 is an alanine residue, position 787 is an arginine residue, position 835 is a lysine residue, position 848 is a valine residue and position 1347 is a serine residue, wherein said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the human KDR fusion protein.~~

Claim 52 (previously presented): A membrane preparation according to claim 51 wherein the heterologous protein is GST.

Claim 53 (new): A method of selecting a compound which antagonizes human KDR, the method comprising combining
a test compound
a membrane preparation comprising a protein comprising from about amino acid 790 to about amino acid 1356 as set forth in SEQ ID NO: 2, wherein position 848 is a valine residue, wherein said membrane preparation is obtained from a recombinant host cell transformed or transfected with a DNA molecule encoding the protein, and
a substrate that is involved in a measurable interaction at a domain of interest within wild-type KDR such that a compound antagonist interacts with said KDR, resulting in a measurable decrease in KDR:substrate activity.

Claim 54 (new): A method of claim 41 wherein said protein is GST/KDR-1.

Claim 55 (new): A method of claim 42 wherein said substrate is pEY.